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# Quality of Care and Outcomes Assessment

## ASSOCIATION BETWEEN USE OF ANTI-ANGINAL MEDICATIONS FOR STABLE CORONARY DISEASE AND RATES OF PERCUTANEOUS CORONARY INTERVENTION: A REPORT FROM THE NCDR®

ACC Moderated Poster Contributions
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**Background:** The 2007 Dartmouth Atlas of Cardiovascular Health Care noted significant variability of percutaneous coronary intervention (PCI) rates by Hospital Referral Region (HRR). Anti-anginal medications can treat coronary artery disease (CAD) and reduce the need for PCI. Appropriateness Criteria for Coronary Revascularization recommend maximizing anti-anginal medications before pursuing elective PCI. We hypothesized that greater use of anti-anginal medications would be associated with lower rates of PCI, due to symptom resolution with medical therapy.

**Methods:** Using data from the CathPCI Registry® and the Dartmouth Atlas, we examined patients undergoing elective PCI for stable CAD from January 1, 2009 through March 31, 2011 and calculated rates of aggressive anti-anginal therapy prior to PCI, defined as being on at least 2 of the following anti-anginal medications: beta blockers, calcium channel blockers, long acting nitrates, ranolazine, or other anti-anginal medicine. We analyzed rates of anti-anginal medications and regressed the rates of providing at least 2 anti-anginal medications within HRRs by the regions' rates of PCI per 1,000 Medicare enrollees in 2007.

**Results:** Amongst 300,772 patient encounters, there were 32.1% of patients on no anti-anginal medications, 47.6% on 1 medication, 16.9% on 2 medications and 3.4% on at least 3 anti-anginal medications. The rate of anti-anginal therapy (at least 2 medications) prior to PCI was 20.3%. Although substantial variability existed across HRRs in applying at least 2 anti-anginal therapies [interquartile range (IQR) 13.0% to 23.3%], there was no association between the rates of PCI [mean 10.2 per 1,000 Medicare enrollees, IQR 4.6 to 22.5] in each HRR and the rates of at least 2 anti-angina medications before PCI [Spearman's rho: 0.0341, p=0.57].

**Conclusions:** We found no association between the intensity of anti-anginal therapy and the use of PCI across HRRs, despite the variability of both. Other variables, besides the intensity of pre-PCI anti-anginal therapy, likely explain the variability of PCI.